

Tuesday, Jan. 8, 2002

ISS crew prepares for future operations with training on robotic arm, spacewalks



KSC provides many opportunities for learning, college degrees

▲ **ISS Update:** Commander Yuri Onufrienko and Flight Engineers Carl Walz and Dan Bursch observed a quiet New Year's holiday in orbit, spending time relaxing and communicating with family and friends. Later in the week, work resumed as the crew operated two experiments: Walz and Bursch both participated in the H-Reflex experiment, a study that gauges the effects of weightlessness on spinal cord excitability and reflexes, and the Pulmonary Function experiment, a study of the effects of space flight and spacewalks on lung function.

Bursch and Walz trained in the operation of the Station's robotic arm, the Canadarm2, while maneuvering the arm to latch on to fixtures on the exterior of the Station. In addition to providing training for the crew, the arm operations tested a new technique being developed to alleviate observed tension in the arm as it releases its latch on a fixture. The tests provided valuable data for engineers on the ground developing those techniques, and similar tests may be repeated later in the mission.

The crews' attention this week will turn to an upcoming milestone for their flight – the first of two spacewalks this month, out of four spacewalks planned during their five-month stay aboard the Station. Walz and Onufrienko are scheduled to conduct a spacewalk for up to six hours tentatively beginning at about 3:50 p.m. EST Jan. 14.

Using Russian Orlan space suits and originating from the Russian Pirs docking compartment airlock, Onufrienko and Walz will reposition an exterior Russian Strela cargo crane from the Station's pressurized mating adapter 1 to the Station's Zarya module, moving it within reach of a similar crane on the Pirs compartment. The move will allow the cranes to be used in tandem to ma-

neuver equipment on the Station's exterior during future spacewalks.

▲ **Education Opportunities:** 1) **University Of Central Florida FEEDS Program** -- The University of Central Florida's Florida Engineering Educational Delivery System (FEEDS) program is located at the Kennedy Space Center Visitor Complex at the Center for Space Education. FEEDS offers engineering undergraduate and graduate courses via tapes for those who cannot make regular on-campus classes but would like to get their degree. The Center is open 24 hours a day for the convenience of the students. For more information about the FEEDS program, please contact Carol Cox, UCF/FSI assistant, at 452-9904 or ccox@mail.ucf.edu.

2) **Florida Space Institute Spring Schedule Is Available** -- The Florida Space Institute is offering courses in Systems Control, Communication Theory, Launch Processing, Microprocessor Technology, Space Science & Technology, Electricity & Electronics, Physics of the Earth's Space Environment, and Laser Beam Propagation Through Random Media, and Topics in Astrodynamics. Classes are live and on-site at KSC. The Industrial Engineering Management degree program is also starting, so register ASAP. For more information, please contact Bob Petty or Carol Cox at the FSI Academic Office at (321) 452-9834.

◆ **Did You Know?** New maps from space-based sensors that can detect flashes of lightning even during the daytime reveal where on Earth the bolts will most likely strike. Read the full story at http://science.nasa.gov/headlines/y2001/ast05dec_1.htm?ist550276. ★

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